Property (T) discrete quantum groups and subfactors with triangle presentations

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Discrete quantum groups and Jones’ subfactors both give rise to rigid $C^*$-tensor categories. I will introduce Kazhdan’s property (T) in this context and present a recent joint work with Matthias Valkevens in which we prove a quantum version of Zuk’s criterion for property (T) and use this criterion to give the first examples of property (T) discrete quantum groups that are not directly related to a discrete group with property (T). These constructions make use of triangle presentations and the associated Euclidean buildings.